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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/535,735

Filing Date: December 21, 2005

Appellant(s): GUNNE ET AL.

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Richard R. Diefendorf  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 12/16/2008 appealing from the Office action  
mailed 2/7/2008.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is deficient. 37 CFR 41.37(c)(1)(v) requires the summary of claimed subject matter to include: (1) a concise explanation of the subject matter defined in each of the independent claims involved in the appeal, referring to the specification by page and line number, and to the drawing, if any, by reference characters and (2) for each independent claim involved in the appeal and for each dependent claim argued separately, every means plus function and step plus function as permitted by 35 U.S.C. 112, sixth paragraph, must be identified and the structure, material, or acts described in the specification as corresponding to each claimed function must be set forth with reference to the specification by page and line number, and to the drawing, if any, by reference

characters. The brief is deficient because there is no mention of a "speedometer" or "vehicle speed detector" (brief page 6, line 5) on pages 32-34 of the specification as recited by the appellant. There is however, a mention of wheel speed sensors in paragraph [125] lines 5 and 7. Examiner believes the speed sensors to be the corresponding structure for the "means for determining at least one dynamic movement input variable" as recited in appealed claim 56.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

A substantially correct copy of appealed claims appears on page 15 of the Appendix to the appellant's brief. The minor errors are as follows: there are no claim status identifiers indicating the present status of the claims.

**(8) Evidence Relied Upon**

DE10065724	Leimbach	(US Translation will be mailed to applicant when received by examiner)
US20040080209	Leimbach	

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

*Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 30-36 and 42-56 are rejected under 35 U.S.C. 102(b) as being anticipated by Leimbach et al. (DE-10065724).

The following rejection relies upon the above DE reference, however the US equivalent (US-20040080209) will be relied upon for an English translation.

Regarding claim 30, Leimbach et al. discloses a method for determining and evaluating at least one dynamic movement input variable (abstract), implementing at least braking interventions for stabilizing the dynamic movement state of the vehicle combination for the towing vehicle when a rolling movement of the vehicle combination is detected upon evaluating the at least one dynamic movement input variable (paragraph 5); and producing a yaw moment that counteracts the rolling movement of the vehicle, combination by braking interventions applied to the front wheels of the towing vehicle (paragraph 31); and implementing braking interventions at the rear wheels of the towing vehicle that effect essentially constant braking at the rear wheels only when a predefined operating state of the vehicle combination is present (paragraph 31).

Regarding claims 31 and 33, Leimbach et al. discloses wherein the predefined operating state of the vehicle combination is present if a rolling movement of the vehicle combination is detected when there is no braking by the driver and the vehicle

combination is located on an underlying surface with a low coefficient of friction (paragraph 28).

Regarding claims 32 and 34, Leimbach et al. discloses wherein the predefined operating state of the vehicle combination is present if a rolling movement of the vehicle combination is detected, when there is no braking by the driver (paragraph 28) and when the braking interventions which are applied to the front wheels cause a risk of the front wheels locking. When brakes are applied there is always a "risk" of wheel lock.

Regarding claims 35 and 36, Leimbach et al. discloses wherein the predefined operating state of the vehicle combination is present if a rolling movement is detected during a driver initiated braking process, and vehicle deceleration occurring as a result of the driver initiated braking process fulfills a predefined comparative criterion (paragraph 28, lines 1-5).

Regarding claim 42, Leimbach et al. discloses wherein the braking interventions, applied to the front wheels, give rise to braking forces, composed of a basic force and a dynamic force component (paragraph 4).

Regarding claim 43, Leimbach et al. discloses wherein at least the towing vehicle is equipped with one of a hydraulic, an electrohydraulic, a pneumatic, and an electropneumatic brake system; and the braking interventions which are applied to the front wheels are such that a brake pressure which is composed of a basic pressure and dynamic pressure peaks is supplied to wheel brake cylinders assigned to the front wheels (paragraphs 3 and 4).

Regarding claim 44, Leimbach et al. discloses wherein a yaw moment which counteracts a rolling movement of the vehicle combination is produced by the dynamic force component (paragraph 31).

Regarding claim 45, Leimbach et al. discloses wherein a value of the basic force components or pressure is determined as a function of a deviation in a yaw angle rate that results from the difference between the actual value for the yaw angle rate which is determined using a yaw angle rate sensor and a setpoint value for the yaw angle rate which is determined using a mathematical model (paragraph 31-39).

Regarding claim 46, Leimbach et al. discloses wherein the value for the dynamic force component is determined as a function of a variable, which describes a change over time of a deviation in the yaw angle rate (paragraphs 31-39).

Regarding claim 47, Leimbach et al. discloses wherein both the basic pressure and the dynamic pressure peaks decrease as the rolling movement decreases (paragraphs 31-39).

Regarding claim 48, Leimbach et al. discloses wherein engine interventions are also carried out in addition to braking interventions; and a moment which is output by the engine is set by way of the engine interventions in such a way that substantially no circumferential forces occur at the driven wheels of the towing vehicle (paragraph 29).

Regarding claim 49, Leimbach et al. discloses wherein engine interventions are carried out in addition to braking interventions; and torque which is output by the engine is set by the engine interventions in such a way that friction losses which occur in the

drive train are compensated and the driven wheels are given a neutral setting as far as the circumferential force is concerned (paragraph 29).

Regarding claim 50, Leimbach et al. discloses a stabilization system that include brake interventions. Once the vehicle is stable again the braking interventions are ceased and normal driving operations continue.

Regarding claim 51, Leimbach et al. discloses wherein braking interventions are carried out at the front wheels as a function of one of a value of sensed yaw moment which acts in the vehicle and a value of the sensed yaw acceleration (paragraph 31).

Regarding claim 52, Leimbach et al. discloses wherein at least a yaw angle rate of the towing vehicle is determined and evaluated as a dynamic movement input variable (paragraph 31).

Regarding claim 53, Leimbach et al. discloses wherein vehicle speed, yaw angle rate and steering angle are evaluated to determine whether a rolling movement is occurring (paragraph 4).

Regarding claim 54, Leimbach et al. discloses wherein a rolling movement is occurring if the yaw angle rate exhibits an oscillating behavior in an operating state of the vehicle combination in which the vehicle speed is higher than an associated threshold value, even though the driver is not making any steering interventions (abstract).

Regarding claim 55, Leimbach et al. discloses wherein the presence of a rolling movement of the vehicle combination is detected as a function of a deviation variable

which includes a deviation between actual value of the yaw angle rate and an associated set point value (paragraphs 31-39).

Regarding claim 56, the rejection of claim 56 relies upon the subject matter as is read above.

#### **(10) Response to Argument**

Regarding claims 30 and 56, Appellant argues that the reference Leimbach (724) does not disclose the claimed invention. Examiner respectfully disagrees, as broadly recited, the claims require a method including, determining and evaluating at least one dynamic movement variable, implementing at least a braking intervention, and producing a yaw moment. Appellant then argues that the Leimbach reference does not address the "manner in which individual brake pressures are determined" (brief page 10, lines 7-9). Examiner respectfully disagrees. As noted in the rejection, paragraphs 0002 and 0031 of the Leimbach document discloses that a dynamic brake regulating system may be used for stabilizing the vehicle motion in which a targeted and selective brake intervention may be executed on each wheel by individually determining a brake pressure for each wheel. Additionally, there are no limitations in the any of the claims that specifically recite "brake pressures" as argued in the brief.

Appellant also argues that the cited reference Leimbach does not disclose a brake regulating system that operates in a manner of that of the present appealed application. Examiner respectfully disagrees. As cited in paragraphs 0002 and 0031, the yaw rate, the transverse acceleration, and the roll angle of the vehicle are suppliable to the control unit as additional input variables. The input variables together with the

input variables generally used such as wheel speed for example are taken into account for determining the manipulated variables for the brake pressures at wheels 2,4,6,8, so that the brake regulating system operates particularly reliably.

In general, the present arguments presented by the appellant appear to be much more specific than the limitations set by the claims.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

James K. Hsiao

/Robert A. Siconolfi/

Supervisory Patent Examiner, Art Unit 3657

Conferees:

Robert Siconolfi /RS/

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